

# ABSTRACT

Processing of plethysmographic signals via the cepstral domain is provided. In one embodiment, a cepstral domain plethysmographic signal processing method (200) includes the steps of obtaining (210) time domain plethysmographic signals, smoothing  
5 (220) the time domain plethysmographic signals, performing (230) a first-stage Fourier transformation of the time domain plethysmographic signals to frequency domain plethysmographic signals, computing (240) power spectrums from the frequency domain plethysmographic signals, scaling (250) the power spectrums and performing (260) a  
10 second-stage Fourier transformation on the log-scaled spectrums to transform the power spectrums into cepstrums, and examining (270) the cepstrums to obtain information therefrom relating to a physiological condition of the patient such as the patient's pulse rate or SPO2 level.